

EAST Search History**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|--|-----------------|------------------|---------|------------------|
| L1 | 11 | (pyridazine\$2 or pyrazine\$2) with (spirobifluoren\$2 or indenofluorene\$2 or tetraaryl methane\$2 or triptycene) and (428/690).ccls. | US-PGPUB; USPAT | OR | ON | 2011/01/29 10:41 |
| L2 | 3 | "2004045662" or "2004339070" or "2004103576" | JPO | OR | ON | 2011/01/29 10:55 |
| S3 | 1 | "20020034659" | US-PGPUB; USPAT | OR | OFF | 2009/06/09 13:33 |
| S4 | 1 | "6329082".pn. | US-PGPUB; USPAT | OR | ON | 2009/06/09 13:36 |
| S5 | 1 | "5840217".pn. | US-PGPUB; USPAT | OR | ON | 2009/06/09 13:36 |
| S6 | 1 | "6352791".pn. | US-PGPUB; USPAT | OR | ON | 2009/06/09 13:52 |
| S7 | 1 | "6229012".pn. | US-PGPUB; USPAT | OR | ON | 2009/06/09 13:53 |
| S8 | 1814 | (OLED or (light with emit\$3)) and phosphorescent and (hole adj3 block\$3) | US-PGPUB; USPAT | OR | ON | 2009/06/09 13:55 |
| S9 | 35 | (OLED or (light with emit\$3)) and phosphorescent and (hole adj3 block\$3) with (heterocyc\$7 or triazine\$2 or heteroaryl or \$5aryl) | US-PGPUB; USPAT | OR | ON | 2009/06/09 13:58 |
| S10 | 51 | (OLED or (light with emit\$3)) and phosphorescent and (hole adj3 block\$3) and triazine\$ and spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/06/09 14:01 |
| S11 | 26 | triazine\$ with spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/06/09 14:05 |
| S12 | 5 | triazine\$ with spirofluorene | US-PGPUB; USPAT | OR | ON | 2009/06/09 14:27 |
| S13 | 67 | hetero\$7 with spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/06/09 14:27 |
| S16 | 1 | "20020034659" | US-PGPUB; USPAT | OR | ON | 2009/06/09 15:41 |
| S17 | 1 | "20020034659" | US-PGPUB; USPAT | OR | ON | 2009/06/09 16:01 |
| S18 | 1 | "20040147742".pn. | US-PGPUB; USPAT | OR | ON | 2009/06/09 16:08 |
| S19 | 121 | triazine\$ and spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/06/09 16:17 |

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| S22 | 6 | triazine\$ and spirobifluorene | DERWENT | OR | ON | 2009/06/09 16:18 |
| S23 | 1 | "2007520875".pn. | DERWENT | OR | ON | 2009/06/09 16:21 |
| S24 | 8153 | phosphorescent and (Perylene or molybdenum or tungsten or rhenium or ruthenium or osmium or rhodium or iridium or palladium or platinum or silver or gold or europium) | US-PGPUB; USPAT | OR | ON | 2009/06/10 08:47 |
| S25 | 182 | phosphorescent and Perylene with (molybdenum or tungsten or rhenium or ruthenium or osmium or rhodium or iridium or palladium or platinum or silver or gold or europium) | US-PGPUB; USPAT | OR | ON | 2009/06/10 08:48 |
| S26 | 8 | phosphorescent and Perylene adj3 (molybdenum or tungsten or rhenium or ruthenium or osmium or rhodium or iridium or palladium or platinum or silver or gold or europium) | US-PGPUB; USPAT | OR | ON | 2009/06/10 08:48 |
| S27 | 776 | Perylene with complex\$3 with (molybdenum or tungsten or rhenium or ruthenium or osmium or rhodium or iridium or palladium or platinum or silver or gold or europium) | US-PGPUB; USPAT | OR | ON | 2009/06/10 08:51 |
| S28 | 206 | Perylene with complex\$3 with (molybdenum or tungsten or rhenium or ruthenium or osmium or rhodium or iridium or palladium or platinum or silver or gold or europium) and electrolumin\$7 | US-PGPUB; USPAT | OR | ON | 2009/06/10 08:51 |
| S29 | 0 | (Perylene adj3 dop\$3) adj3 (molybdenum or tungsten or rhenium or ruthenium or osmium or rhodium or iridium or palladium or platinum or silver or gold or europium) and electrolumin\$7 | US-PGPUB; USPAT | OR | ON | 2009/06/10 08:54 |
| S30 | 186 | (Perylene adj3 dop\$3) | US-PGPUB; USPAT | OR | ON | 2009/06/10 08:55 |
| S31 | 8 | (Perylene adj3 dop\$3) with metal | US-PGPUB; USPAT | OR | ON | 2009/06/10 08:55 |
| S32 | 103 | (phosphorescent adj4 dop\$3) adj4 (molybdenum or tungsten or rhenium or ruthenium or osmium or rhodium or iridium or palladium or platinum or silver or gold or europium) | US-PGPUB; USPAT | OR | ON | 2009/06/10 08:59 |

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| S33 | 5 | (phosphorescent adj4 dop\$3) adj4 (molybdenum or tungsten or rhenium or ruthenium or osmium or rhodium or iridium or palladium or platinum or silver or gold or europium) and spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/06/10 08:59 |
| S36 | 43 | (phosphorescent adj4 dop\$3) adj4 (molybdenum or tungsten or rhenium or ruthenium or osmium or rhodium or iridium or palladium or platinum or silver or gold or europium) and perylene | US-PGPUB; USPAT | OR | ON | 2009/06/10 09:04 |
| S37 | 44 | (phosphorescent adj4 dop\$3) and spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/06/10 09:05 |
| S38 | 1 | "7498437".pn. | US-PGPUB; USPAT | OR | ON | 2009/06/10 09:08 |
| S39 | 69 | (phosphorescent adj4 emitt\$3) and spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/06/10 09:18 |
| S40 | 1 | "6229012".pn. | US-PGPUB; USPAT | OR | ON | 2009/06/10 09:21 |
| S41 | 99 | spirobifluorene\$ with (carbazoles or ketones or imines or phosphine oxides or phosphine sulfides or phosphine selenides or phosphazenes or sulfones or sulfoxides or silanes or polypodal adj3 metal or oligophenylene\$) | US-PGPUB; USPAT | OR | ON | 2009/06/10 09:25 |
| S42 | 12 | spirobifluorene\$ adj4 (carbazoles or ketones or imines or phosphine oxides or phosphine sulfides or phosphine selenides or phosphazenes or sulfones or sulfoxides or silanes or polypodal adj3 metal or oligophenylene\$) | US-PGPUB; USPAT | OR | ON | 2009/06/10 09:25 |
| S43 | 525 | spirobifluorene\$ and (carbazoles or ketones or imines or phosphine oxides or phosphine sulfides or phosphine selenides or phosphazenes or sulfones or sulfoxides or silanes or polypodal adj3 metal or oligophenylene\$) | US-PGPUB; USPAT | OR | ON | 2009/06/10 09:28 |
| S44 | 42 | spirobifluorene\$ and (carbazoles or ketones or imines or phosphine oxides or phosphine sulfides or phosphine selenides or phosphazenes or sulfones or sulfoxides or silanes or polypodal adj3 metal or oligophenylene\$) with phosphores\$7 | US-PGPUB; USPAT | OR | ON | 2009/06/10 09:29 |

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| S45 | 109 | spirobifluorene\$ and triazine and polymer | US-PGPUB; USPAT | OR | ON | 2009/06/11 08:42 |
| S46 | 11 | spirobifluorene\$ and triazine with polymer | US-PGPUB; USPAT | OR | ON | 2009/06/11 08:42 |
| S47 | 4669 | triazine with polymer | US-PGPUB; USPAT | OR | ON | 2009/06/11 09:32 |
| S49 | 0 | triazine with polymer with spirobifluorene\$ | EPO; JPO | OR | ON | 2009/06/11 09:33 |
| S50 | 500 | triazine with polymer | EPO; JPO | OR | ON | 2009/06/11 09:33 |
| S51 | 1 | "6870198".pn. | USPAT | OR | OFF | 2009/06/20 08:27 |
| S52 | 0 | perylene adj phosphores\$3 | US-PGPUB; USPAT | OR | ON | 2009/06/20 08:33 |
| S53 | 0 | perylene adj3 phosphores\$3 | US-PGPUB; USPAT | OR | ON | 2009/06/20 08:33 |
| S54 | 0 | perylene\$5 adj3 phosphores\$3 | US-PGPUB; USPAT | OR | ON | 2009/06/20 08:33 |
| S55 | 1 | perylene\$5 with phosphores\$3 | US-PGPUB; USPAT | OR | ON | 2009/06/20 08:34 |
| S56 | 0 | perylene\$5 with phosphores\$3 | EPO; JPO | OR | ON | 2009/06/20 08:35 |
| S57 | 1 | \$5perylene\$5 with phosphores \$4 | EPO; JPO | OR | ON | 2009/06/20 08:36 |
| S58 | 137 | \$5perylene\$5 with phosphores \$4 | US-PGPUB; USPAT | OR | ON | 2009/06/20 08:36 |
| S59 | 13 | \$5perylene\$5 adj3 phosphores \$4 | US-PGPUB; USPAT | OR | ON | 2009/06/20 08:37 |
| S60 | 1 | "6872824" | USPAT | OR | OFF | 2009/12/16 09:11 |
| S61 | 3 | "2005053055" | DERWENT | OR | OFF | 2009/12/16 09:13 |
| S62 | 1 | "6352791".pn. | US-PGPUB; USPAT | OR | OFF | 2009/12/16 09:15 |
| S63 | 1 | "6229012".pn. | US-PGPUB; USPAT | OR | OFF | 2009/12/16 09:16 |
| S64 | 212 | (pyridazine\$ or pyrmifine\$ or pyrazine\$ or triazine\$) and spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/12/16 09:34 |
| S65 | 0 | (pyridazine\$ or pyrmifine\$ or pyrazine\$ or triazine\$) and spirobifluorene and (hole adj2 block43) | US-PGPUB; USPAT | OR | ON | 2009/12/16 09:34 |
| S66 | 233 | (pyridazine\$ or pyrimidine\$ or pyrazine\$ or triazine\$) and spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/12/16 09:36 |
| S67 | 41 | (pyridazine\$ or pyrimidine\$ or pyrazine\$ or triazine\$) with spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/12/16 09:36 |

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| S68 | 0 | (hole adj2 blockinh) and spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/12/16 09:37 |
| S69 | 609 | spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/12/16 09:37 |
| S70 | 212 | spirobifluorene and (hole with blocking) | US-PGPUB; USPAT | OR | ON | 2009/12/16 09:38 |
| S71 | 88 | spirobifluorene and (hole with blocking) and (pyridazine\$ or pyrmifine\$ or pyrazine\$ or triazine\$) | US-PGPUB; USPAT | OR | ON | 2009/12/16 09:38 |
| S72 | 4887 | triazine with polymer | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:06 |
| S73 | 212 | (pyridazine\$ or pyrmifine\$ or pyrazine\$ or triazine\$) and spirobifluorene | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:06 |
| S74 | 11 | S72 and S73 | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:06 |
| S75 | 1 | "5840217".pn. | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:09 |
| S76 | 1 | "5077142".pn. | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:10 |
| S77 | 95 | spirobifluorene\$ and (carbazoles or ketones or imines or phosphine oxides or phosphine sulfides or phosphine selenides or phosphazenes or sulfones or sulfoxides or silanes or polypodal adj3 metal or oligophenylene\$) and (phosphorescent with dop\$5) | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:12 |
| S78 | 89 | spirobifluorene\$ and (carbazoles or ketones or imines or (phosphine adj2 oxide \$2) or (phosphine adj2 sulfide \$2) or (phosphine adj2 selenide \$2) or phosphazene\$2 or sulfone \$2 or sulfoxide\$2 or silane\$2 or (polypodal adj3 metal) or oligophenylene\$) and (phosphorescent with dop\$5) | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:16 |
| S79 | 1 | "6329082".pn. | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:35 |
| S80 | 110 | (pyridazine\$5 or pyrmifine\$5 or pyrazine\$5 or triazine\$5) with (hole adj block\$3) or (electron adj2 transport\$3) and cbp with (phosphorescent adj dop\$5) | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:39 |
| S81 | 9 | (pyridazine\$5 or pyrimidine\$5 or pyrazine\$5 or triazine\$5) with ((hole adj block\$3) or (electron adj2 transport\$3)) and cbp with (phosphorescent adj dop\$5) | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:41 |

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| S82 | 43 | :(pyridazine\$5 or pyrimidine\$5 or pyrazine\$5 or triazine\$5) with ((hole adj block\$3) or (electron adj2 transport\$3)) and cbp with dop\$5 | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:43 |
| S83 | 1 | "6329082".pn. | US-PGPUB; USPAT | OR | ON | 2009/12/16 12:54 |
| S84 | 1 | "5840217".pn. | US-PGPUB; USPAT | OR | ON | 2009/12/16 13:08 |
| S85 | 49 | ((HORST) near2 (VESTWEBER)). INV. | US-PGPUB; USPAT | OR | OFF | 2010/05/14 14:19 |
| S86 | 23 | ((ANJA) near2 (GERHARD)). INV. | US-PGPUB; USPAT | OR | OFF | 2010/05/14 14:19 |
| S87 | 1 | ((PHILIPP) near2 (STOBEL)). INV. | US-PGPUB; USPAT | OR | OFF | 2010/05/14 14:19 |
| S88 | 160 | triazine\$ and spirobifluorene | US-PGPUB; USPAT | OR | ON | 2010/05/14 14:21 |
| S89 | 28 | ((HORST) near2 (VESTWEBER)). INV. and S88 | US-PGPUB; USPAT | OR | ON | 2010/05/14 14:21 |
| S90 | 1783 | (pyridazine or pyrazine or triazine) and ((hole adj3 block \$3) or (electron adj3 transpot \$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 13:49 |
| S91 | 39 | (pyridazine or pyrazine or triazine) with ((hole adj3 block \$3) or (electron adj3 transpot \$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 13:49 |
| S92 | 3 | "2003021694" | DERWENT | OR | ON | 2010/09/21 13:59 |
| S93 | 1285 | (pyridazine or pyrazine or triazine) with (spirobifluorene or fluorene or indenofluorene or tetraarylmethane or tetraphenylmethane) | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:06 |
| S94 | 34958 | ((hole adj3 block\$3) or (electron adj3 transpot\$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:07 |
| S95 | 217 | S93 and S94 | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:07 |
| S96 | 1 | S93 with S94 | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:07 |
| S97 | 3 | (pyridazine and pyrazine and triazine) with ((hole adj3 block \$3) or (electron adj3 transpot \$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:44 |
| S98 | 3 | (pyridazine and triazine) with ((hole adj3 block\$3) or (electron adj3 transpot\$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:45 |
| S99 | 3 | (pyrazine and triazine) with ((hole adj3 block\$3) or (electron adj3 transpot\$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:45 |

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| S100 | 580 | ((pyrazine and triazine) and ((hole adj3 block\$3) or (electron adj3 transpot\$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:45 |
| S101 | 528 | ((pyrazine with triazine) and ((hole adj3 block\$3) or (electron adj3 transpot\$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:46 |
| S102 | 528 | ((pyrazine with triazine) and (hole adj3 block\$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:46 |
| S103 | 0 | ((pyrazine with triazine) near3 (hole adj3 block\$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:46 |
| S104 | 3 | ((pyrazine with triazine) with (hole adj3 block\$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:46 |
| S105 | 1 | "6194090".pn. | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:48 |
| S106 | 1 | "20040062952" | US-PGPUB; USPAT | OR | ON | 2010/09/21 14:56 |
| S107 | 0 | spirobifluorene with triazine4 | US-PGPUB; USPAT | OR | ON | 2010/09/21 15:27 |
| S108 | 42 | spirobifluorene with triazine\$ | US-PGPUB; USPAT | OR | ON | 2010/09/21 15:27 |
| S109 | 29 | spirobifluorene with triazine\$ and ((hole adj3 block\$3) or (electron adj3 transpot\$3)) | US-PGPUB; USPAT | OR | ON | 2010/09/21 15:27 |
| S110 | 1 | "6229012".pn. | US-PGPUB; USPAT | OR | ON | 2010/09/21 20:56 |
| S111 | 1 | "6229012".pn. | USPAT | OR | OFF | 2010/09/26 13:37 |
| S112 | 1 | "20070051944" | US-PGPUB; USPAT | OR | ON | 2011/01/27 18:33 |
| S113 | 1 | "20030042850" | US-PGPUB; USPAT | OR | ON | 2011/01/27 18:35 |
| S114 | 1 | spirobifluorene adj3 triazine | US-PGPUB; USPAT | OR | ON | 2011/01/27 18:36 |
| S115 | 20 | spirobifluorene adj2 fluorene\$2 | US-PGPUB; USPAT | OR | ON | 2011/01/27 18:41 |
| S116 | 1 | "20040147742" | US-PGPUB; USPAT | OR | ON | 2011/01/27 19:07 |
| S117 | 1 | "6229012".pn. | US-PGPUB; USPAT | OR | ON | 2011/01/27 22:33 |
| S118 | 11644 | ((pyridazine\$2 or pyrazine\$2) with hetero\$5 | US-PGPUB; USPAT | OR | ON | 2011/01/29 08:46 |
| S119 | 6 | ((pyridazine\$2 or pyrazine\$2) with hetero\$5) and electrolumin\$5 | US-PGPUB; USPAT | OR | ON | 2011/01/29 08:47 |
| S120 | 75 | ((pyridazine\$2 or pyrazine\$2) with (spirobifluoren\$2 or indenofluorene\$2 or tetraaryl methane\$2 or triptycene) | US-PGPUB; USPAT | OR | ON | 2011/01/29 08:52 |

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| S121 | 0 | :(pyridazine\$2 or pyrazine\$2) adj4 (spirobifluoren\$2 or indenofluorene\$2 or tetraarylmethane\$2 or triptycene) | US-PPGUB; USPAT | OR | ON | 2011/01/29 08:53 |
| S122 | 45 | :(pyridazine\$2 or pyrazine\$2) with (spirobifluoren\$2 or indenofluorene\$2 or tetraarylmethane\$2 or triptycene) and electrolumin\$6 | US-PPGUB; USPAT | OR | ON | 2011/01/29 08:53 |

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